

ABSTRACT OF THE DISCLOSURE

In a phase shift mask blank, a desired transmittance and phase shift amount are given in the vicinity of 157 nm as a wavelength of an F₂ excimer laser. The phase shift mask blank has a phase shifter film satisfactory in a resistance to exposure light irradiation, resistance to chemicals, processability, moldability, and shape stability. The halftone phase shift mask blank having the phase shifter film on a transparent substrate is used in an exposure light wavelength range of 140 nm to 200 nm, the phase shifter film is formed of a film containing main constituting elements of silicon, oxygen, and nitrogen, and contains 35 to 45% of silicon, 1 to 60% of oxygen, and 5 to 60% of nitrogen in atomic percentage, and a total amount of the elements occupies at least 90% or more of a whole composition constituting the phase shifter portion.